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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/679,794

10/06/2003

Michael L. Babala

1-24754

3701

4859

7590

01/21/2005

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EXAMINER

CHAPMAN JR, JOHN E

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,794

Applicant(s)

BABALA, MICHAEL L.

Examiner

John E Chapman

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-17 and 20-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-17, 21, 22 and 26 is/are allowed.
- 6) ☒ Claim(s) 11-14, 20 and 23-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Condne et al. in view of Greiff et al.

Condne discloses an inertial sensor comprising a sensor element 20 mounted on a base member 16, and a plurality of signal conditioning circuits 36 and 40 connected to the sense element. High frequency and low frequency accelerations comprise different ranges. Hence, the only difference between the claimed invention and the prior art consists in mounting the sense element on a silicon wafer. Greiff teaches that it is known in the art to mount an accelerometer on a silicon wafer in order to provide a micromechanical accelerometer. Accordingly, merely to mount the sense element of Condne on a silicon wafer would have been obvious to one having ordinary skill in the art in order to provide a micromechanical accelerometer.

3. Claims 11-14 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broillet et al. in view of Greiff et al.

Broillet discloses an inertial sensor comprising an acceleration sensor 31 mounted on a body, which is subjected to vibrations, and a plurality of signal conditioning circuits 33 and 34 connected to the accelerometer. Low frequency vibrations comprise a first range of change in a body motion parameter, and high frequency vibrations comprise a second range of change in a body motion parameter. Hence, the only difference between the claimed invention and the prior

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art consists in mounting the sense element on a silicon wafer. Greiff teaches that it is known in the art to mount an accelerometer on a silicon wafer in order to provide a micromechanical accelerometer. Accordingly, merely to mount the acceleration sensor of Broillet on a silicon wafer would have been obvious to one having ordinary skill in the art in order to provide a micromechanical accelerometer.

Regarding claims 11 and 13, it is well known in the art to provide signal conditioning circuitry integral with a silicon wafer in order to provide a compact sensor, as well as separately therefrom in order to provide interchangeability of different signal conditioning circuitry with a single sensor.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broillet in view of Greiff as applied to claim 12 above, and further in view of Flach et al.

Flach teaches that it is known in the art to form an application specific integrated circuit 14 on a silicon wafer 10. Accordingly, it would have been obvious to one having ordinary skill in the art to include the signal conditioning circuits integral within an application specific integrated circuit formed on a silicon wafer.

5. Claims 15-17, 21, 22 and 26 are allowed.

6. Applicant's arguments filed 01 December 2004 have been fully considered but they are not persuasive. Applicant argues that the apparatus of Condue et al. senses changes in two different body motion parameters, namely, the angular position of a vehicle and the rotational

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velocity of the vehicles, and does not changes to the same specific body motion parameter, as recited in amended claim 14. However, the apparatus of Condue et al. comprises a single inertial sensor element disposed on a base member and is operable to sense a change in a specific motion parameter of a body to which is it attached, namely, the rotation of the body. Accordingly, claim 14 fails to distinguish over the prior art.

Applicant argues that the apparatus of Broillet et al. generates a single output signal and not a plurality of signals, as recited in amended claim 14. However, the apparatus of Broillet et al. clearly generates a plurality of electrical signals, one in channel 33 and another in channel 34. That the plurality of electrical signals are subsequently combined at summing point 40 does not diminish the fact that each channel comprises an electrical signal. Note dependent claim 25. Accordingly, claim 14 fails to distinguish over the prior art.


7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John E Chapman
Primary Examiner
Art Unit 2856